a plate disposed within the housing;

cutouts on the plate for receiving the threaded shafts; and

a knob threadably mounted on each threaded shaft, said knobs being rotatable about the shaft to be screwed into engagement with said plate for securing said dispensing head to the plate.

4. [(Amended)] The liquid dispenser as recited in claim 39 further comprising:

a plurality of tips, each tip being associated with one of the chambers, each tip having a first end with an enlarged opening, and a second end having a smaller opening than the opening of the first end, the first end of each tip being in fluid communication with an opening of an associated chamber; and

a flexible seal extending around each chamber opening and being engaged by the first ends of the tips to provide a substantially air and liquid-tight seal between the first ends of the tips, and the associated openings of the chambers.

9. [(Amended)] The liquid dispenser as recited in claim 7, wherein the clamp is engageable by the apparatus for moving each piston within its associated chamber to move the clamp away from the wall of the housing against the clamping force of the urging apparatus to release the clamping force on the tray.

10 [(Amended)] The liquid dispenser as recited in claim 39 wherein said apparatus for moving each piston within its associated chamber comprises:

a plate coupled to each of said pistons; and

a motor operably coupled to the plate for moving the plate toward and away from the chambers to cause movement of said pistons within the chambers.

11 [(Amended)] The liquid dispenser as recited in claim 10 further comprising:

a tray containing a plurality of tips, each tip including a first end having an enlarged opening and a second end having an opening smaller than the opening of the first end;

at least one bracket being mounted on the housing and being movable with respect to the housing for clamping the tray against the housing so that the first end of each tip is in fluid communication with one of said chambers; and

a connection between the plate and the bracket for moving the bracket away from the housing in response to movement of the plate to release the tray.

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12. [(Amended)] The liquid dispenser as recited in claim 11 further comprising a spring for urging the at least one bracket against the housing for providing a clamping force on the tray.

Kindly add the following new claims:

39. [(New)] A liquid dispenser comprising:

a housing;

a dispensing head comprising a plurality of chambers and associated pistons for withdrawing a measured amount of a liquid from a source and expelling another measured amount of the liquid into the wells of a plate;

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apparatus for moving each piston within its associated chamber; and

slideways disposed on the housing for supporting the dispensing head, said dispensing head being slidable into and out of the housing along the slideways.

40. [(New)] The liquid dispenser as recited in claim 3, wherein said housing plate is coupled to said apparatus for moving each piston.

41. [(New)] The liquid dispenser as recited in claim 40, wherein said threaded shafts are connected to said pistons in said dispensing head and wherein said apparatus for moving each piston is coupled to the pistons through said threaded shafts.

42. [(New)] Apparatus for pipetting liquid from a source of liquid to wells disposed in plates, said apparatus comprising:

a liquid dispensing head for dispensing liquid into wells of plates;

a first stacker assembly where unused plates are stored;

a second stacker assembly for accepting and storing plates into which a liquid has been dispensed;

an assembly carrying a carriage moveable back and forth along a first direction between said liquid dispensing head and said first stacker assembly and said second stacker assembly;

at least one plate lifter disposed on said carriage;

a motor mounted on said carriage for moving said plate lifter back and forth with respect to said carriage in a second direction generally perpendicular to said first direction; and

a second motor mounted on said assembly for moving said carriage and said plate lifter back and forth in a third direction generally perpendicular to both said first direction and said second direction.

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43. (New) The apparatus as recited in claim 42 further comprising:

a second plate lifter disposed on said carriage; and

a third motor mounted on said carriage for moving said second plate lifter back and forth in said second direction with respect to said carriage.

44. (New) The apparatus as recited in claim 43, wherein said second motor moves both said first and said second plate lifters and said carriage simultaneously in said third direction.

45. (New) The apparatus as recited in claim 42, further comprising a third stacker assembly for storing plates which contain a fluid to be dispensed and which are transported to said dispensing head for withdrawal of liquid by said carriage.

46. (New) The apparatus as recited in claim 45, further comprising a fourth stacker assembly for storing plates retrieved from the third stacker assembly after liquid has been withdrawn by said dispensing head.

47. (New) The apparatus as recited in claim 46 wherein said first and second stacker assemblies are disposed on one side of said liquid dispensing head in said first direction and wherein said third and fourth stacker assemblies are disposed on an opposite side of said liquid dispensing head in said first direction.

48. [(New)] A method for transferring liquid from a first set of plates having multiple wells to a second set of plates having multiple wells, said method comprising:

positioning in a first stacker assembly disposed adjacent a dispensing head a first stack of plates taken from the first set of plates having wells with a liquid to be dispensed;

positioning in a second stacker assembly adjacent the dispensing head a stack of empty plates taken from the second set of plates;

transporting a plate from the first stacker assembly to the dispensing head:

using the dispensing head, withdrawing liquid from wells of the plate transported from the first stacker assembly;

moving the plate taken from the first stacker assembly from the dispensing head to a third stacker assembly after withdrawal of liquid;

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transporting an empty plate from the second stacker assembly to the dispensing head;

dispensing liquid from the dispensing head into the wells of the empty plate; and

transporting the empty plate into which liquid has been dispensed from the dispensing head to a fourth stacker assembly.

49. [(New)] The method as recited in claim 48, wherein after said third transporting step, plates are laterally removed from the fourth stacker assembly by opening at least one door disposed on one side of the fourth stacker assembly.

50. [(New)] The method as recited in claim 48, wherein said first positioning step comprises inserting plates laterally into the first stacker assembly by opening a door disposed on one side of the first stacker assembly.

51. [(New)] The method as recited in claim 48 wherein, after said moving step, plates are laterally removed from said third stacker assembly by opening a door disposed on one side of the third stacker assembly.

52. [(New).] The method as recited in claim 48 wherein said second positioning step comprises inserting plates laterally into the second stacker assembly by opening a door disposed on one side of the second stacker assembly.

53. [(New)] The method as recited in claim 48, wherein said first and said second transporting steps comprise:

raising a plate lifter in a generally vertical direction to engage a bottom-most plate in the stacker assembly; and

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moving the bottom-most plate alone in a direction generally perpendicular to the vertical direction to separate the bottom-most plate from a plate immediately adjacent thereto to avoid sticking of the bottom-most plate to the plate immediately adjacent thereto.

54. [(New)] The method as recited in claim53, wherein said first and said second transporting steps further comprise:

raising all of the plates in the stacker assembly above arms that support the bottom-most plate;

withdrawing the arms which support the bottom-most plate;

lowering all of the plates in the stacker assembly until a lower edge of the bottom-most plate is disposed below the arms: and

extending the arms to engage a side of the bottom-most plate below a lower edge of the plate immediately adjacent the bottom-most plate..

55. [(New)] The method as recited in claim 48, further comprising removing the third stacker assembly and the fourth stacker assembly to a position remote from the dispensing head for removal of plates therefrom.

56. [(New)] The method as recited in claim 48, wherein said step of moving the plate taken from the first stacker assembly from the dispensing head to a third stacker assembly, and said step of transporting the empty plate into which liquid has been dispensed from the dispensing head to a fourth stacker assembly both comprise:

inserting the moved or transported plate into the respective stacker assembly from the bottom to engage a bottom-most plate already in the stacker assembly;

withdrawing arms which support the bottom-most plate already in the stacker assembly;

raising the moved or transported plate and the bottom-most plate already in the stacker assembly to a position above the arms;

extending the arms to an extended position; and

lowering plates in the stacker assembly until a lower edge of the moved or transported plate rests on the arms.

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57. [(New)] The method as recited in claim 48 further comprising:

prior to said first positioning step, filling the first stacker assembly with plates taken from the first set of plates at a location remote from the dispensing head;

prior to said second positioning step, filling the second stacker assembly with plates taken from the second set of plates at a location remote from the dispensing head.

58 [(New)] The method as recited in claim 57, wherein filling the first stacker assembly, and filling the second stacker assembly, both comprise opening a door disposed along one side of the stacker assembly and inserting plates laterally into the stacker assembly.

59 [(New)] The method as recited in claim 55, wherein plates are removed from the third and fourth stacker assemblies at a position remote from the dispensing head by opening a door disposed in a side of the stacker assembly and removing the plates laterally from the stacker assembly.

60 [(New)] The method as recited in claim 48, wherein the step of dispensing liquid from the dispensing head into the wells of the empty plate comprises:

dispensing the liquid through pipette tips having lower ends disposed in alignment with associated wells; and

moving the plate with respect to the dispensing head in a generally horizontal direction to place the lower end of each pipette tip adjacent a wall of an associated well to swipe any drops of liquid remaining on the lower end of each pipette tip into its associated well.